



A Sierra Monitor Company

Driver Manual
(Supplement to the FieldServer Instruction Manual)

FS-8700-23 Cleaver Brooks Hawk

APPLICABILITY & EFFECTIVITY

Effective for all systems manufactured after May 1, 2001

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1. CB-Link Description

The CB-Link driver allows the FieldServer to transfer data to and from devices over RS-485 using CB-Link protocol. The information that follows describes how to expand upon the factory defaults provided in the configuration files included with the FieldServer.

Refer to “Model 833-2771 CB-Link” Manual #65-0216 and “Model 833-2757 General Purpose Interface ControlBus Module” Manual #65-0220 from Cleaver Brooks.

2. Driver Scope of Supply

2.1. Provided by FieldServer Technologies for this driver

Fieldserver Technologies Part #	Description
SPA59137	RS-485 7-way connector adapter with attached cable

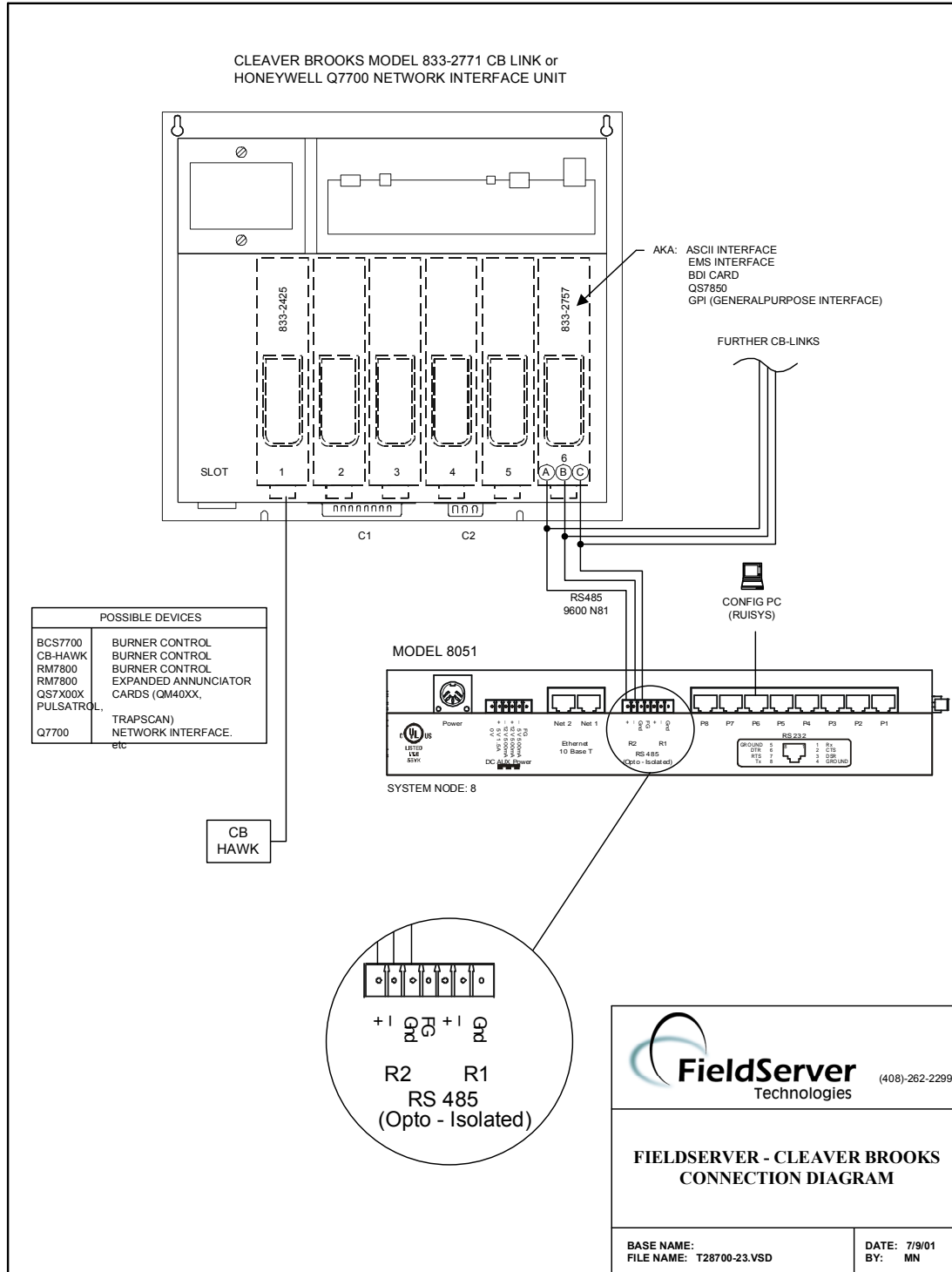
2.2. Provided by the Supplier of 3rd Party Equipment

PART #	DESCRIPTION
	CB-Link Controller

3. Hardware Connections

The FieldServer can be connected to the CB – Link device as shown below.

Configure the PLC according to manufacturer’s instructions



4. Configuring the FieldServer as a ChB-Link Client

For a detailed discussion on FieldServer configuration, please refer to the FieldServer Configuration Manual. The information that follows describes how to expand upon the factory defaults provided in the configuration files included with the FieldServer (See “.csv” sample files provided with the FieldServer).

This section documents and describes the parameters necessary for configuring the FieldServer to communicate with a ChB-Link Server

Note that * indicates an optional parameter, with the **bold** legal value being the default.

4.1. FieldServer

Section Title		
Bridge		
Column Title	Function	Legal Values
Title	Title for CSV file	Any text, Maximum 32 characters
System_Node_ID	Node ID of the FieldServer	8 – 254

Example

// Common Information		
Bridge		
Title,	System_Node_ID	
CB_Link client,	11	

4.2. Data Arrays/Descriptors

Section Title		
Data_Arrays		
Column Title	Function	Legal Values
Data_Array_Name	Provide name for Data Array	Up to 15 alphanumeric characters
Data_Format	Provides data format	INT16, INT32, BIT, FLOAT
Data_Array_Length	Number of Data Objects	1-10,000

Example

// Data Arrays		
Data_Arrays		
Data_Array_Name,	Data_Format,	Data_Array_Length
DA_AI_01,	Float,	200

4.3. Client Side Connection Descriptions

Section Title		
Connections		
Column Title	Function	Legal Values
Port	Specify which port the device is connected to the FieldServer	R1-R2
Baud	Specify baud rate	9600
Parity	Specify parity	None
IC_Timeout	Inter-Character Timeout	>10.0 s
Squelch_Timer	Squelch suppression time	>0.02 s
Poll_Delay	Minimum time between polls	0,55

Example

```
// Client Side Connections

Connections
Port,          Baud,   Parity,   Ic_Timeout,   Squelch_Timer,   Poll_Delay
R2,           9600,   None,    10,           0.02,           0.6
```

4.4. Client Side Node Descriptors

Section Title		
Nodes		
Column Title	Function	Legal Values
Node_Name	Provide name for node	Up to 32 alphanumeric characters
CB Link_ID	Device address	See Section 4.4.1 A, B, and C below
Protocol	Specify protocol used	CB_Link
Port	Port connection	R1-R2
Node_Type	Specify controller connected to CB-Link	See Section 4.4.2

Example

```
// Client Side Nodes
Nodes
Node_Name,          CBlink_ID,          Protocol,          Port,          Node_Type
CBH1,              0 1 20,            CB_Link,          R2,            Hawk
```

4.4.1. Node_ID

Format for declaring node ID is A B C.

A: 0 if only one CB-Link is attached, 8–254 if multiple CB-Links are attached, Default = 0

B: Slot the device is attached to in the PC Link 1-5, default 1

C: Device type (Declare Device Type Code):

Device Description	Device Type Code
Auxenh	26
Ec78xx	32
Efenh	26
Hawk	20
Llenh	26
Orenh	26
Pulsa	19
Q7700	1
Qm40xx	17
Rm78xx	32
S7800	36
S7830	34
Tdenh	26
Testcard	99
Trapscan	18

4.4.2. Node_Type

Hawk, EC78XX. Others by request. (Refer to Device Information Table)

4.5. Client Side Map Descriptors

4.5.1. FieldServer Related Map Descriptor Parameters

Column Title	Function	Legal Values
Map_Descriptor_Name	Name of this Map Descriptor. This Name refers to the variable in the related .bp2 property file.	Any of the variable names in the related .bp2 property file.
Data_Array_Name	Name of Data Array where data is to be stored in the FieldServer	One of the Data Array names from "Data Array" section above
Data_Array_Offset	Starting location in Data Array	0 to maximum specified in "Data Array" section above
Function	Function of Client Map Descriptor	RDBC

4.5.2. Driver Related Map Descriptor Parameters

Column Title	Function	Legal Values
Node_Name	Name of Node to fetch data from	One of the node names specified in "Client Node Descriptor" above
Scan_Interval	Specify poll rate	>1.0s

4.5.3. Timing Parameters

Column Title	Function	Legal Values
Timeout	Specify maximum response time	>30.0s

4.5.4. Map Descriptor Example

```
// Client Side Map Descriptors
```

Map_Descriptors	Map_Descriptor_Name,	Data_Array_Name,	Data_Array_Offset,	Function,	Node_Name,	Scan_Interval,	Timeout
Control_Source,	DA_AI_01,	1,	RDBC,	CBH1,	10,	30	
Oper_Pressure,	DA_AI_01,	2,	RDBC,	CBH1,	10,	30	

Appendix A. Advanced Properties

Appendix A.1. Property Files

Each Controller interfacing to the FieldServer requires associated property files (denoted by file extensions .bp1 and .bp2) to be loaded into the FieldServer. At present, the property files listed in the device information table below are preloaded onto the FieldServer when delivered. Other property files may be available upon request.

Appendix A.2. Configuration Files

Each Controller listed in the device information table below has an associated configuration file as shown in the device information table. This configuration file can be used as a basis for building a configuration for the FieldServer as it contains the mapping for the related module.

Note: SYSNet is the generic name for networks of the following modules. Controlbus is the generic name for the networks in a NIM/CBLink configuration

Appendix B. Device Information Table

NETWORK INTERFACE UNIT					
MAKE	MODEL	NAME			
Honeywell	Q7700	Network Interface Unit			
Cleaver Brooks	833-2771	CB-Link			
CONTROL MODULES					
MAKE	MODEL No. OF MODULE	MODULE NAME	PROPERTY FILE NAME (.BP1; .BP2)	CONFIGURATION FILE NAME (.CSV)	NOTES
Honeywell	QS7700A	BCS7700	N/A	N/A	
Honeywell	QS7800A	7800 SERIES Control	N/A	N/A	
Honeywell	QS7800C	QM40XX Data Acquisition Module	ON REQUEST	QM40XX	Data Acquisition Modules
Armstrong	QS7800D	Trapscan System	ON REQUEST	ON REQUEST	
Honeywell	QS7800E	PulsaFeeder PULSAtrol	PULSA	PULSA	
Honeywell	QS7800A	S7830 Expanded Annunciator	S7830	S7830	Expanded Annunciator
Honeywell	QS7800A	S7800 Keyboard/Display Module	S7800	S7800	
Honeywell	QS7800A	ST7800 Relay Module	ST7800		Requires S7800 module
Honeywell		RM7800E,G,L,M Relay Modules	RM78XX	RM78XX	
Honeywell		RM7840E,G,L,M Relay Modules	RM78XX	RM78XX	
Honeywell	N/A*	Q7700A,B			
CB-Link	833-2727	Display Module	N/A	N/A	
CB-Link	833-2729	Data Control Bus Module	N/A	N/A	
CB-Link	833-2734	CB 783	ON REQUEST	ON REQUEST	Requires 833-2727 or 833-2729 on module
CB-Link	833-2734	CB 780	ON REQUEST	ON REQUEST	
CB-Link	833-2734	CB 784	ON REQUEST	ON REQUEST	

* This is the chassis that the above modules plug into

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